Legacy Subscriber Equipment

Section VIII (a)

Policies

(a) Establish backward compatibility levels for 800 MHz "legacy subscriber equipment" to be supported on Project Hoosier SAFE-T.

(b) Affirm the use of public safety communications equipment capable of operation in both 806MHz and 821MHz public safety bands.

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1) Background

Project Hoosier SAFE-T consists of a network of 126 intelerepeater (IR) or communications sites. Each site must be capable of using the 806 MHz and 821 MHz frequency bands. By design, most of the IR sites in the network will use the 821 MHz band, with very few using a combination of both 806 MHz and 821 MHz public safety band frequencies.

Project Hoosier SAFE-T, statewide, supports the National Public Safety Planning Advisory Committee (NPSPAC) interoperability concept of improving communications among differing public safety personnel. The NPSPAC plan designated five intercommunications channels on a nationwide basis; and, that one of these channels be designated as the National Public Safety Calling Channel, with the remaining four channels as tactical channels. As such, Project Hoosier SAFE-T has designated many of the sites to be equipped with the specified "calling" and "tactical" channels as prescribed in the overall NPSPAC interoperability plan.

The F.C.C. "notice" as stipulated in FCC 87-359 General Docket No. 87-112 proposed and adopted as a requirement *… "to require manufacturers to include interoperability channels in all equipment using the new 800 MHz channels."*

2) Capabilities

(a) Provide interoperability across both 806 MHz and 821 MHz public safety bands.

(b) Provide flexibility in the deployment of frequencies throughout the state with respect to the licensing of Project Hoosier SAFE-T communication sites.

(c) Provide "smartzone/interzone" functionality to as many users as is needed.

3) Constraints

(a) Distribution and availability of 806 MHz and 821 MHz frequencies statewide.

4) Recommendations

The Project Hoosier SAFE-T system is comprised of Motorola's SmartZone/OmniLink 4.1 architecture. This technology accommodates a number of the existing legacy subscriber technologies currently deployed statewide. There are, however, some devices (mobile and portable) currently capable of operation on existing systems that, in their native mode, will not function in a "smartzone/interzone" environment, and may not be capable of operation on both 806 MHz and 821 MHz frequency bands.

Users planning to participate in Project Hoosier SAFE-T should be aware of the limitations of certain portable and mobile radios and, if in use, understand that they may not be capable of operation and/or full functionality on the Project Hoosier SAFE-T system.

Motorola GTX Privacy Plus Analog Portable and Mobile Subscriber Units

The 800 MHz GTX family of subscriber units were designed and licensed for use in the 806 MHz frequency spectrum. They are not designed or licensed to operate in the 821 MHz spectrum. Although designed and licensed for the 806 MHz spectrum, there is no guarantee that a GTX model subscriber will operate at any RF site in the Hoosier SAFE-T network. Communications sites currently using 806 MHz frequencies may be converted to 821 MHz, or contain a combination of 806 MHz frequencies and 821 MHz frequencies. The GTX model subscriber currently operating on a trunked 800 MHz RF site may or may not operate once the RF site has been converted for Project Hoosier SAFE-T.

If functional at all on the Project Hoosier SAFE-T system, the GTX radios will be limited to only sites within a specific zone having 806 MHz frequencies deployed.

Motorola MTX8000 Privacy Plus Analog Portable Subscriber Units

These radios are supported on Project Hoosier SAFE-T, although they may require "Retry Timer" adjustment and can only operate within a single site or a limited number of sites within one specified zone.
Other *limitations* include:
   a) Interzone Call Capability – Calls between a subscriber affiliated in one zone to a subscriber affiliated to second zone.
   b) OmniLink Aware Functionality – Feature that allows subscribers "limited roaming" between zones.

Motorola SmartNet Portable and Mobile Subscriber Units

The following analog radios are not supported on for SmartZone OmniLink 4.1 architecture:
   a)   STX Portables
   b)   Syntor X Mobile
   c)   LTS Portable
   d)   LCS Mobile
   e)   MTS 2000 Portable, manufacture 1992 or earlier (units cannot be upgraded)

Project Hoosier SAFE-T will support, with limited functionality, most legacy MTS2000, MCS2000 and Analog SPECTRA radios and depending upon the requirement of each radio group, varying degrees of upgrades may be required.

Motorola MTS2000 Analog Portable Radios

As noted above, MTS2000 radios manufactured in 1992 or before are not supported and cannot be upgraded. MTS2000 radios manufactured from 1993 to 1998 will require a software refresh as well as the "Retry Timer" adjustment for support of SmartZone OmniLink 4.1.

Motorola Analog SPECTRA Mobile

These radios will require Control Board hardware upgrades and new Interconnect board for dash and remote mount.

Motorola SmartNet Subscriber Equipment

Refers to radios with Smart Net System Software installed and SmartZone, SmartZone OmniLink or OmniLink Aware software options.

These radios are supported on the Project Hoosier SAFE-T system; however, there are operational concerns that must be considered.

Motorola SmartZone Subscribers

Operational limitations – not capable of roaming between zones with automatic call hand off. With versions of software prior to 2nd Quarter of 1998, users may experience adverse radio operation when attempting to communicate with members who have talkgroup members in multiple zones.

The Project Hoosier SAFE-T System Administrator may limit SmartZone subscribers from participating in multiple zone type calls by using the "valid sites" setting for talk groups and radio users in the User Configuration System Database.